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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,378	09/25/2003	Byoung Ho Lim	049128-5134	3377

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EXAMINER	
DUONG, TAI V	

ART UNIT	PAPER NUMBER
2871	

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/669,378	LIM, BYOUNG HO	
	Examiner	Art Unit	
	Tai Duong	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *9-13* is/are allowed.

6)☒ Claim(s) *1, 3-6 and 8* is/are rejected.

7)☒ Claim(s) *2 and 7* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Korea on 10/05/02. It is noted, however, that applicant has not filed a certified copy of the Korean application as required by 35 U.S.C. 119(b).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3, 5, 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ono et al (US 5,847,781) in view Song (US 6,038,002).

Ono et al disclose in Figs. 1 and 2 a liquid crystal display (LCD) panel comprising a plurality of gate lines GL and data lines DL formed on a substrate; a plurality of pixel electrodes ITO1 receiving data signals; a semiconductor layer AS formed along a direction of each of the data lines at a lower part of the data lines; and a plurality of light-shielding patterns SKD formed along the direction of the data lines; the light-shielding patterns and the gate including the same materials; a protective film PSV1 including inorganic insulating material to cover the data line, and source and drain electrodes of a thin film transistor TFT wherein each of the light-shielding patterns SKD overlap opposing edges of the data line DL and the semiconductor layer AS (col. 6, line 16 - col. 7, line 35). As to claims 1, 3, 5 and 6, the only difference between the LCD panel of Ono and that of the instant claims is the pixel electrodes receiving data signals having different polarities from each other. However, Song discloses that it was known to

employ pixel electrodes receiving data signals having different polarities from each other (col. 8, lines 36-43). Thus, it would have been obvious to a person of ordinary skill in the art to employ pixel electrodes receiving data signals having different polarities from each other in Ono's panel for offsetting crosstalks, as disclosed by Song.

As to claim 8, Song discloses that the protective layer can be made of an *inorganic* or *organic* insulating material (col. 4, lines 24-26). Thus, it would have been obvious to a person of ordinary skill in the art to employ the protective layer made of an inorganic or organic insulating material because these insulating materials are art-recognized equivalents for the same purpose, as disclosed by Song.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ono et al and Song as applied to claim 3 above, and further in view of Yamazaki et al.

Claim 4 additionally recites the light-shielding patterns include at least one of aluminum, aluminum-neodymium, and copper. Yamazaki et al disclose that it was known to employ gate lines including aluminum or copper (col. 18, lines 19-23). Thus, it would have been obvious to a person of ordinary skill in the art to employ in the LCD panel cited in the above rejection of claim 3 light-shielding patterns including aluminum or copper because these materials are art-recognized equivalents for the same purpose, as disclosed by Yamazaki et al.

Claims 2 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 2 and 7 would be allowed over the prior art of record because none of the prior art discloses or suggests a LCD panel having structure as recited in claim 1 *in combination* with the feature "wherein a width of the semiconductor layer is larger than a width of the data line" (claim 2) or the feature "wherein the light-shielding patterns are separated from the pixel electrode by about 1 μm, and a first one of the light-shielding patterns is separated from a second one of the light-shielding patterns by about 4 μm" (claim 7).

Claims 9-13 are allowed over the prior art of record because none of the prior art discloses a method of fabricating a liquid crystal display panel, comprising the steps of: forming a gate electrode, a gate line, and *individual first and second light-shielding patterns* on a substrate; forming a gate insulating film on the substrate to cover the gate electrode, the gate line, and the individual first and second light-shielding patterns; forming a semiconductor layer on the gate insulating film *to partially overlap* the *individual first and second light-shielding patterns*; forming a data line on the gate insulating film *to partially overlap the individual first and second light-shielding patterns and the semiconductor layer*, a source electrode that is connected to the data line, and a drain electrode that faces the source electrode with the semiconductor layer therebetween; forming a protective film having a contact hole that exposes a portion of the drain electrode; and forming a plurality of pixel electrodes on the protective film, wherein *adjacent ones of the pixel electrodes receive pixel voltages having different polarities.*

Any inquiry concerning this communication should be directed to Tai Duong at telephone number (571) 272-2291.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

TD

TVD

02/05

TOAN TON
PRIMARY EXAMINER